

**ANSWERS TO QUESTIONS
REQUEST FOR QUOTE (RFQ) NNC10344654Q**

Question 1.

How do you join the front thermo wires from the front end of the connector to the back end of the connector if you have pins already inserted in each connector from the front?

The technical approach for fabricating these connectors varies from manufacturer to manufacturer and should be part of the proposal discussion. NASA's principal considerations were for:

1. A high density connector (20 shielded TC's per connector) whose high vacuum connector fit into our existing vacuum flange.
2. Insuring that thermocouple alloy materials be used throughout the connector assembly for signal carrying conductors. By defining the pin material, NASA highlighted this requirement.
3. Rated for high vacuum use including low outgassing.

Question 2.

Need detailed drawings for each connector showing how to mate the wires from the front end of the connectors?

Detailed NASA drawings of the connectors do not exist.

Question 3.

Which one is the female connector and which one is the male connector?

The bulkhead connector is a female receptacle with male pins. The mating connector (not a part of this procurement) is a male plug with female sockets. Both connectors are delineated in the procurement specification.

Question 4.

How is the Protection cap applied?

The protection cap is a bayonet mount accessory which protects the pins of the bulkhead connector when it is not mated.

Question 5.

Why was the port size of 1 3/4" chosen instead of a 1 7/8"?

The housing size was based upon the existing flange hole sizes. Replacing the existing high vacuum flanges would not be trivial and would add cost to the overall job. The government has more flexibility with the hermetic wire feed through and would consider other options; however, these other options may add some cost to the overall job and need to be considered on a case by case basis.

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Question 6.

Do you have an approved source for your special TC copper contacts and the specially tested foil pair shielded TC cables?

NASA does not have an “approved source” and you are free to select the source for your special TC copper contacts and thermocouple wiring as long as all requirements are addressed. We contacted Tri-Star Electronics International as a potential vendor for TC copper contacts. TC copper pins are not a standard part number but can be custom fabricated. We have discussed with Marlin Manufacturing the industry standards for providing quality thermocouple wiring and believe that they meet the TC wire provider requirements of this procurement.

Question 7.

Can a special very low outgassing epoxy connector inserts in a 61 #20 pin version based on Mil-C-26482 with bayonet lock coupling and same size be used instead of the 38999 connector. This connector may have superior outgassing properties because a 38999 connector uses high outgassing silicone connector contact inserts?

Reviewing MIL-DTL-26482H and MIL-DTL-38999L, both standards could supply an acceptable connector and would be considered. To space rate the 38999 connector we are revising the drawing (underline indicates change):

Note 2 of Drawing PE-1411-00041577-E-801 paragraph 1 should read:
Chamber Bulkhead Connector
(High Vacuum Side): MS27466G25F61P

Note 3 of Drawing PE-1411-00041577-E-801 paragraph 1 should read:
Chamber Bulkhead Connector
(High Vacuum Side): MS27466G25F61P

Note 3 of Drawing PE-1411-00041577-E-801 paragraph 5 should read:
Strain Relief: M85049/49-2-24F

The new drawing has the same drawing number and is revision A.

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Question 8.

An error exists in the drawing for the socket pins, the drawing needs to be revised to include the proper military specification:

Note 3 of Drawing PE-1411-00041577-E-801 paragraph 2 should read:

Copper TC Grade Crimp Sockets
Same as M39029/56-354, Except oxygen
Free Copper, Electrolytic Tough Pitch
C11000, 4 Fingers w/BeCu Napkin Ring

Note 3 of Drawing PE-1411-00041577-E-801 paragraph 4 should read:

Power Grade Crimp Sockets (For Shields)
M39029/56-354

The new drawing has the same drawing number and is revision A.